

Abstract Submitted to the
International Conference on Strongly Correlated Electron Systems
University of Michigan, Ann Arbor
August 6-10, 2001

**Pressure effect on the specific heat and electric resistance in the
 $\text{Ce}(\text{Ru}_{0.6}\text{Rh}_{0.4})_2\text{Si}_2$ compound**

Hongwei Gu¹, Jie Tang¹, Akiyuki Matsushita¹, Toshifumi Taniguchi², Yoshikazu Tabata²,
Yoshihito Miyako²

¹ *National Research Institute for Metals, Tsukuba, Ibaraki 305-0047, Japan*

² *Graduate School of Science, Osaka University, Toyonaka, Osaka 560-0043, Japan*

The heavy-fermion system $\text{Ce}(\text{Ru}_{1-x}\text{Rh}_x)_2\text{Si}_2$ with the ThCr_2Si_2 -type tetragonal structure has attracted extensive attention because of its rich physical properties. With the substitution of Rh for Ru (increasing x from 0 to 1), the ground state of the system will change from FL to SDW, then to NFL and finally AF. In this article the pressure effect on the specific heat and resistance for $x=0.40$ were studied. The samples used for the measurements were single crystals. Under ambient pressure the compound shows a NFL behavior in low temperature, the increasing or decreasing of the chemical substitution will lead to long range moment ordering. The pressure experiments showed that with increasing pressure, the NFL behavior was suppressed, when pressure is larger than about 0.9-1.1 GPa, FL was restored. Comparing the pressure effect with the chemical substitution it is obvious that kondo effect was greatly improved by applied pressure.